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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,620	12/17/2003	Woong-Kwon Kim	053785-5123	4079
30827 7590 06/18/2007 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW			EXAMINER	
			SCHILLING, RICHARD L	
WASHINGTON, DC 20006			ART UNIT	PAPER NUMBER
			1752	
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•		•	06/18/2007	PAPER

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APPLICATION NO.I CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10736620	12/17/03	KIM FT AI	053785-5123

KIM ET AL.

053785-5123

MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006

**EXAMINER** 

Richard L. Schilling

**ART UNIT PAPER** 

1752

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# BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/736,620 Filing Date: December 17, 2003

Appellant(s): KIM ET AL.

McKenna, Long & Aldridge LLP For Appellant

**EXAMINER'S ANSWER** 

Art Unit: 1752

This is in response to the appeal brief filed March o8, 2007 appealing from the Office action mailed November 10, 2005.

### (1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

## (2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

### (3) Status of Claims

The statement of the status of claims contained in the brief is correct.

### (4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

## (5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

## (6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

#### WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner. .

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The rejection of claims 1-34 under 35 USC 103 as being unpatentable over Chang et al. in view of Peng et al. is withdrawn in view of appellants' statement on page 10 of their brief that Chang et al. and the instant application were subject to an obligation of common assignment at the time the invention was made.

## (7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct

#### (8) Evidence Relied Upon

6,448,158

Peng et al.

9-2002

#### (9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-34 are rejected under the first paragraph of 35 USC 112 as being broader than the enabling disclosure. The specification fails to show one skilled in the art how to pattern the second electrodes of the claims on appeal comprising amorphous transparent layers which are light exposed to crystalline states with the unexposed non-crystallized portions being removed without the exposed crystalline state portions being removed other than by the methods disclosed in the specification on page 24, paragraph 49 and page 25, paragraph 50. The enabling disclosure is limited to using amorphous indium tin oxide (ITO) or indium zinc oxide as the amorphous material which has the properties of changing to crystalline by exposure to light and being removable by oxalic acid in the amorphous but not the crystalline state

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The enabling disclosure is also limited to using oxalic acid in the etching step to remove the amorphous state but not the crystalline state. It is not well known in the art what other amorphous materials may be used which form crystalline materials on exposure to light, are transparent, are electrically conductive for use in liquid crystal displays as in the claims on appeal and which may be removed only in the amorphous state without removal in the crystalline state. Peng et al. shows that a method of exposing ITO amorphous layers to light to form crystalline areas wherein the unexposed amorphous area are removable by oxalic acid as disclosed in appellants' specification is an nonobvious, patentable method of imaging an electrode. To find other methods using different materials with all of the properties required by the claims on appeal would require finding materials not apparent or obvious from the amorphous materials disclosed in appellants' specification.

## (10) Response to Argument

Appellants' argument on page 9 of their brief that they are entitled to materials that would be obvious to one skilled in the art that fall within the claims on appeal is unconvincing. The specification lacks guidance as to other obvious materials. The method in the specification is limited to using ITO or IZO amorphous layers without guidance as to other materials which would have all the properties of being useful as electrodes, being changeable from amorphous to crystalline with light exposure and being removable in the amorphous state with etching agents of oxalic acid without being removable in the crystalline state. The specification also lacks guidance to etching agents other than oxalic acid that would remove the materials in the amorphous state

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but not in the crystalline state. As explained in the above rejection, Peng et al. shows

that the methods of patterning as disclosed on pages 24 and 25 of appellants'

specification are not obvious from other methods of patterning electrodes but rather are

non-obvious patentable methods. It would not be apparent to one skilled in the art from

the methods disclosed in appellants' specification for the step of patterning the second

electrode in the claims on appeal what other amorphous materials and removing agents

other than those disclosed may be used without undue experimentation.

## (11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained Respectfully submitted.

Richard I. Schilling

Conferees:

Jennifer Kelb-Michener

Cynthia Kelly